Instructions

- Instructions on how to fill out this form are shown in red. It is recommended to leave the instructions in the final document and simply add the requested information where indicated.
- **Shaded Text** indicates a placeholder that should be replaced with information specific to this ICAID, and the shading removed.
- Completed forms, in Word format, or any questions should be sent to the IEEE Standards Association (IEEE-SA) Industry Connections Committee (ICCom) Administrator at the following address: industryconnections@ieee.org.
- The version number above, along with the date, may be used by the submitter to distinguish successive updates of this document. A separate, unique Industry Connections (IC) Activity Number will be assigned when the document is submitted to the ICCom Administrator.

1. **Contact**

Provide the name and contact information of the primary contact person for this IC activity. Affiliation is any entity that provides the person financial or other substantive support, for which the person may feel an obligation. If necessary, a second/alternate contact person’s information may also be provided.

**Name:** Carol McDonald  
**Email Address:** carol@gneissconcept.com  
**Employer:** Gneiss Concept  
**Affiliation:** Gneiss Concept

**Name:** Alfredo Ballester  
**Email Address:** alfredo.ballester@ibv.org  
**Employer:** IBV  
**Affiliation:** IBV

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Sponsors and Activity officers who are responsible for IEEE work items.

2. **Participation and Voting Model**

Specify whether this activity will be entity-based (participants are entities, which may have multiple representatives, one-entity-one-vote), or individual-based (participants represent themselves, one-person-one-vote).

Specify: “Entity-Based”
3. **Purpose**

3.1. **Motivation and Goal**
Briefly explain the context and motivation for starting this IC activity, and the overall purpose or goal to be accomplished.

Describe the motivation and goal.

- To enable a seamless and secure pipeline of deliberate sensing, capturing, digitizing, sharing and immersion of data-based, body model and body wear experiences...anywhere, anytime (ie, data-sumer), to create an ecosystem;
- Key elements may include ... confidentiality, integrity, availability, flexibility to digitize human for any solution, static, dynamic, more TBD
- This exploration will include:
  - Identify and classify types of 3D body processing technologies;
  - Identify and classify use cases of 3D body processing;
  - Identify gaps in existing nascent standards and recommended practices as 3D body processing spreads beyond first adopters;
  - Identify need and propose PARs for new standards and best practices for 3D body processing and adjacent technologies (like 2D augmented reality, Web3D, Motion Capture);
  - Identity special requirements for quality, file formats (including meta data and textiles), footwear, definitions of fit, communications/security/privacy, mega technologies impact

3.2. **Related Work**
Provide a brief comparison of this activity to existing, related efforts or standards of which you are aware (industry associations, consortia, standardization activities, etc.).

Describe the related work.

- There are a variety of standards efforts around 2D augmented reality that include 2D human modeling but none that we know of for 3D body characterization, modeling and processing;

3.3. **Previously Published Material**
Provide a list of any known previously published material intended for inclusion in the proposed deliverables of this activity.

List the previously published material, if any.

- White paper #1: IEEE Industry connections, 3D Body Model Processing Initiative, An Introduction
- IEEE Industry connections, Personalized Digital Last (a Women’s Example) – The Tool Required to Enable Mass Customization
3.4. **Potential Markets Served**
Indicate the main beneficiaries of this work, and what the potential impact might be.

Describe the potential markets.
- There are several potential markets where standards related to 3D body processing will add value:
  - Consumers in
    - Fashion
    - Retail
    - Health/wellness
    - Athletics
    - Etc.
  - Suppliers at various layers
    - User-facing/product offering Supplier
    - Platform Suppliers
    - Application Software Suppliers
    - Operating System Suppliers
    - Application Processor Suppliers
    - Etc.

3.5. **How will the activity benefit the IEEE?**

The IEEE benefits from this activity as it develops a new community of technologists that is cross-disciplinary and relevant to many IEEE areas of interest, including standards, yet focused on an application area that has not been explicitly addressed to date in other areas of the IEEE. IEEE benefits by attracting new membership, providing leadership in a discipline area, and being at the forefront of new standards that enable digital transformation in areas such as body scanning, retail/apparel experience, health/wellness and other consumer facing applications.

4. **Estimated Timeframe**
Indicate approximately how long you expect this activity to operate to achieve its proposed results (e.g., time to completion of all deliverables).

**Expected Completion Date:** Q4/2021 (on-going)

IC activities are chartered for two years at a time. Activities are eligible for extension upon request and review by ICCom and the IEEE-SA Standards Board. Should an extension be required, please notify the ICCom Administrator prior to the two-year mark.

5. **Proposed Deliverables**
Outline the anticipated deliverables and output from this IC activity, such as documents (e.g., white papers, reports), proposals for standards, conferences and workshops, databases, computer code, etc., and indicate the expected timeframe for each.

Specify the deliverables for this IC activity.
Deliverables for this activity include:
- Sub-group reports on Quality, File Formats, Footwear, F i t , Communications/Security/Privacy, and Mega Technologies Impact
- White papers - Standard reviews, Industry questionnaires
- Documents outlining agreed upon industry requirements for standards
- Proposal for standard(s) (e.g. P3141) on 3D body processing;
- Liaisons/Collaborations with ISO, Web 3D, 3DRC
- Mktg collateral (ie, CES press release, Logos/Poster, Grand Challenges)
- Quarterly Meetings/Workshops;
- IEEE webpage with supporting sub pages providing an information portal for this new technology community, as well as outward facing information of interest
6. **Funding Requirements**
Outline any contracted services or other expenses that are currently anticipated, beyond the basic support services provided to all IC activities. Indicate how those funds are expected to be obtained (e.g., through participant fees, sponsorships, government or other grants, etc.). Activities needing substantial funding may require additional reviews and approvals beyond ICCom.

No additional funding requests are anticipated for services beyond the standard services provided for IC programs. Activity members will provide any needed support for hosted meetings, marketing activities that exceed basic IC support.

Examples include:

- Quarterly F2F activity meetings (time/locations TBD) – activity members will be solicited to host/sponsor any in person meetings at their company facilities or other industry events

- Marketing support beyond that provided by IEEE-SA – activity members will coordinate with IEEE for any additional marketing initiatives in support of the IC activity – examples envisioned include:
  - Consumer Electronic Show marketing package (press release, media event, demo, keynote, etc.)
  - Others industry channels (ie, 3D Body Tech, PI Apparel, keynote, etc.)
  - Workshops

7. **Management and Procedures**

7.1. **IEEE Sponsoring Committee**
Indicate whether an IEEE sponsoring committee of some form (e.g., an IEEE Standards Sponsor) has agreed to oversee this activity and its procedures.

**Has an IEEE sponsoring committee agreed to oversee this activity?: Yes**

If yes, indicate the sponsoring committee’s name and its chair’s contact information.

**Sponsoring Committee Name:** IEEE Consumer Electronics Society Standards Committee (CES/SC)  
**Sponsoring Committee Chair’s Name:** Yu Yuan  
**Sponsoring Committee Chair’s Email Address:** y.yuan@ieee.org

Additional sponsoring committee information, if any.

7.2. **Activity Management**
If no IEEE sponsoring committee has been identified in 7.1 above, indicate how this activity will manage itself on a day-to-day basis (e.g., executive committee, officers, etc).

Briefly outline activity management structure.
The activity will be managed by an executive committee as defined in the activity’s policies and procedures.

7.3. Procedures
Indicate what documented procedures will be used to guide the operations of this activity; either a) modified baseline Industry Connections Activity Policies and Procedures, or b) Sponsor or Working Group policies and procedures accepted by the IEEE-SA Standards Board. The chosen policies and procedures must be reviewed by ICCom.

Will use the baseline Industry Connections Activity Policies and Procedures.

8. Participants

8.1. Stakeholder Communities
Indicate the stakeholder communities (the types of companies or other entities, or the different groups of individuals) that are expected to be interested in this IC activity, and will be invited to participate.

See section 3.4

8.2. Expected Number of Participants
Indicate the approximate number of entities (if entity-based) or individuals (if individual-based) expected to be actively involved in this activity.

We have approximately 45 entities across the ecosystem currently involved (~25 very active), see section 8.3 for a detailed listing. Engagement with other groups planned for 2020 is expected to expand the participation further.

8.3. Current Participants
Provide a list of the entities or individuals that will be participating from the outset. It is recommended there be at least three initial participants for an entity-based activity, or five initial participants (each with a different affiliation) for an individual-based activity.

Use the following table for an entity-based activity:

The following table provides a partial list of current participants. We are actively reaching out to companies and universities and expect more to join us, for example, outreach at the 3D Body Tech conferences yielded requests for information. Participants involved but not listed in table include:

- Shenzhen University, Juangan University, The University of Manchester, Riga Technical University, Kansas State University
- 3D Body Cloud, Shenzhen Esun Display, Mojito 3D Studio, Mirage, NetVirta, Cryos, Staramba GmbH, Size Stream
<table>
<thead>
<tr>
<th>Entity</th>
<th>Primary Contact</th>
<th>Additional Representatives</th>
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<tbody>
<tr>
<td>Gneiss Concept</td>
<td>Carol McDonald</td>
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<tr>
<td>Biomechanics Institute of Valencia (IBV)</td>
<td>Alfredo Ballester, Sandra Alemany Juan Carlos Gonzalez</td>
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<td>Bauerfeind</td>
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<td>Target</td>
<td>Julianne Harris, Alexis Kantor, Sandra Gagnon</td>
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<td>Masaaki Mochimaru, Makiko Kouchi</td>
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